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Result
No.
                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 08
Maximum Match 1008
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
  3320987654
33210987654
                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  Score
 7273
                                                                                                                                                                                                                                                                             Query
Match
 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  January 7, 2002, 16:05:24; Search time 77.81 Seconds (without alignments) 21.676 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                     SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            us-08-569-749-7
269
                                                                                                                                                                                                                                                                                                                                                                                                                                            100059 seqs, 36664827 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LARAGEYY IGPGDRVACFAC.....WEPKDDAMSEHRRHFPNCPF
                                                                                                                                                                                                                                                                               Length DB
 BIR3_HUMAN
BIR3_MOUSE
PIAP_PIG
BIR2_HUMAN
BIR2_MOUSE
BIR4_HUMAN
BIR_CHICK
BIRA_MOUSE
BIRA_MOUSE
BIRA_MOUSE
BIRA_MOUSE
BIRE_MOUSE
BIRE_MOUSE
BIRE_MOUSE
BIRB_MOUSE
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BIRB_MOUSE
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BIRB_MOUSE
BIRB_MOUSE
BIRS_MOUSE
BIRS_HOMB
IAP3_NPVOP
ZFP_IRV6
BIRS_MOUSE
BIRS_HOMB
IAP1_NPVAC
IAP1_NPVAC
IAP1_NPVAC
IAP1_NPVAC
IAP1_NPVAC
IAP1_NPVAC
IAP1_ASFM1
IAP1_ASFM1
IAP1_ASFM1
IAP1_ASFM1
IAP1_ASFM1
IAP1_ASFM1
                                                                                                                                                                                                                                                                                                       SUMMARIES
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013490 homo sapien 062210 mus musculu 062240 sus scrofa 13489 homo sapien 060863 mus musculu p98170 homo sapien 090660 gallus gall 060989 mus musculu 099016 rattus norv 013075 homo sapien 0915b mus musculu 097016 mus musculu 097016 mus musculu 097016 mus musculu 097016 mus musculu 0915b mus musculu 0915b mus musculu 091704 mus musculu 024307 drosophila pseu 041437 orgyia pseu 041437 orgyia pseu 041436 drosophila p41436 drosophila p41436 drosophila p41436 drosophila p41436 drosophila p41436 drosophila p41436 atrican swi 010296 orgyia pseu p41454 atrican swi 012407 african swi 011453 african swi 011453 african swi 011453 african swi
                                                                                                                                                                                                                                                                             Description
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 |
|--------------------|------------|--------------------|------------|------------|------------|------------|--------------------|------------|------------|------------|------------|
| 53.5 | 54 | 54 | 54 | 54.5 | 54.5 | 55 | 56 | 56.5 | 57 | 58.5 | 63.5 |
| 19.9 | 20.1 | 20.1 | 20.1 | 20.3 | 20.3 | 20.4 | 20.8 | 21.0 | 21.2 | 21.7 | 23.6 |
| 525 | 1004 | 954 | 644 | 517 | 424 | 370 | 2111 | 181 | 122 | 284 | 278 |
| 1 | Н | - | 1 | بر | \mapsto | \vdash | <u>-</u> | _ | H | _ | ۲ |
| YBF4_YEAST | ATNA_ARTSF | BIR1_YEAST | ARNT_DROME | DMPN_PSESP | EXON_NPVOP | DPSD_CRIGR | YPB4_CAEEL | VG79_HSVI1 | PA21_BOTAS | CELA_ACEXY | HUPJ_RHOCA |
| P34219 saccharomyc | - | P47134 saccharomyc | • | | | | Q11107 caenorhabdi | | | | - |

ALIGNMENTS

| 888888 | 35668 | R R R R R | RR | 3 2 2 3 | R R R R | R R R | 7 R R | æ æ æ | R R | RT | RR X | D R | 288 | 202 | G D | DE DE | ဌ | S A | RESULT BIR3_H ID B |
|--|---|--|---|---|--|---------------------------|---|--|--------------------|--|---|---------------|--|------------------|--|-------------------|---|------------------------|--------------------------|
| - INDICALILLAR LOCATION (CYTOPLASMIC (POTENTIAL) I- SUBCELLULAR LOCATION: CYTOPLASMIC (POTENTIAL) ITISSUE SPECIFICITY: PRESENT IN MANY FETAL AND ADULT TISSUES MAINLY EXPRESSED IN ADULT SKELETAL MUSCLE, THYMUS, TESTIS, OVARY, AND PANCREAS, LOW OR ABSENT IN BRAIN AND PERIPHERAL BLOOD LEUKOCYTES. | NAT. Struct. Biol. 6:648-651(1999). NAT. STRUCT. BIOL. 6:648-651(1999). -I- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR | STRUCTURE BY NMK OF 200-303. MEDITINE-99332054, pubMed-10404221; Hinds M.G., Norton R.S., Vaux D.L., Day C.L.; "Solution structure of a baculoviral inhibitor of apoptosis (IAP) reneat ". | Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996). | Cloning and expression of apoptosis inhibitory procedure to the function to inhibit apoptosis and/or bind tumor necrosis factor | UENCE FROM N.A. SUE-Fetal liver; SUE-Fetal liver; LINE-96209843; PubMed-8643514; | Nature 379:349-353(1996). | Parahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.; Suppression of apoptosis in mammalian cells by NAIP and a related family of TAP cenes ". | MEDIANE-BIA9249; PubMed-8552191; MEDIANE-BIA9249; PubMed-8552191; Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat G., | SEQUENCE FROM N.A. | to baculoviral inhibitor of apoptosis proteins."; Cell 83:1243-1252(1995). | WEDLINE-96128127; PubMed-8548810; WEDLINE-96128127; PubMed-8548810; Rothe M., Pan MG., Henzel W.J., Ayres T.M., Goeddel D.V.; "The TNFR2-TRAF signaling complex contains two novel proteins related | (1) SECTION A | gurafyola; metazoa; enorgaea; erantaea; vertebrata, bucereoscomit, Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBT TaxTD=9606: | sapiens (Human). | PROTEIN 2) (IAP HOMOLOG B). BIRC3 OR API2 OR IAP2 OR MIHB. | , IAP R (HIAP2 | | 516; (Rel. 35, Crea | 1 UMAN IR3_HUN |

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Query Match
Best Local S
Matches 46
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Pfam; PF0063; CARD; 1.

Pfam; PF00069; CARD; 1.

Pfam; PF00097; 2f-C3H44; 1.

SMART; SM00238; BIR; 3.

SMART; SM00114; CARD; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; RING; 1.

SMART; SM00184; BIR_REPEAT_1; 3.

PROSITE: PS50143; BIR_REPEAT_2; 3.

PROSITE: PS50143; BIR_REPEAT_2; 3.

PROSITE: PS50143; BIR_REPEAT_2; 3.

PROSITE: PS50209; CARD; 1.

APOPICS18; Zinc-finger; Repeat_1; 3.
                                                                                                                                                                   LMOUSE
BIR3_MOUSE STANDARD; PRT; 612 AA.
062210; 008864;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 3 (INHIBITOR OF APOPTOSIS PROTEIN 2) (MIAP2) (MIAP-2).
BIRCJ OR API2 OR IAP2.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REPEAT
REPEAT
DOMAIN
ZN_FING
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
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    Rothe M., Pan M. G., Henzel W.J., Ayres T.M., Goeddel D.V.;
"The TNFR2-TRAF signaling complex contains two novel proteins related to baculoviral inhibitor of apoptosis proteins.";
Cell 83:1243-1252(1995),
                                                                                         SEQUENCE FROM N.A., AND PARTIAL S
MEDLINE-96128127; PubMed-8548810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; L49431; AAC41942.1; -. EMBL; U45879; AAC50372.1; -. EMBL; U37547; AAC50508.1; -.
                                                                                                                                                           NCBI_TaxID-10090;
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InterPro; IPR001315;
InterPro; IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: BELONGS TO THE IAP FAMILY.
SIMILARITY: CONTAINS 3 BIR REPEATS.
SIMILARITY: CONTAINS 1 CARD DOMAIN.
SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1QBH; 20-OCT-99.
601721; -.
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nilarity 100.
Conservative
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CARD.
Znf_ring.
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BIR 2.

BIR 3.

CARD.

CARD.

CARD.

C - Y (IN REF. 2).

C -> G (IN REF. 2).

C -> U (IN REF. 2).

C -> U (IN REF. 2).

C -> U (IN REF. 2).
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pred. No. 2.3e-27;
Mismatches 0;
                                                                                                                 SEQUENCE
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PIAP_PIG
ID PIAE
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InterPro; IPA.
InterPro; IPA.
InterPro; IPRO1.
InterPro; IPRO1.
InterPro; IPRO1641;
INTERPPOTO; IP
                                                                                                                                                                   PIAP_PIG STANDARD; PRT; 3
062640;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence up
20-AUG-2001 (Rel. 40, Last annotation
PUTATIVE INHIBITOR OF APOPTOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NECROSIS FACTOR RECEPTOR 2 (TNFR2)

-- SUBCELULAR LOCATION: CYTOPLASMIC (POTENTIAL).

-- TISSUE SPECIFICITY: EXPRESSED IN HEART, BRAIN,
LIVER, SKELETAL MUSCLE, KIDNEY, AND TESTIS.

-- SIMILARITY: BELONGS TO THE 1AP FAMILY.

-- SIMILARITY: CONTAINS 3 BIR REPEATS.

-- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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Genomics 46:495-503(1997).

Genomics 40:495-503(1997).

FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS

FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR

FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR
Sus scrofa
Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; L49433; AAC42078.1; -. EMBL; U88909; AAC53532.1; -.
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SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPHCPF 242
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      (Pig).
Metazoa;
Chordata; Craniata; Vertebrata; Euteleostomi;
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apoptosis
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Cherton-Horvat G.,

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Query Match
Best Local Similarity 93.5
Matches 43; Conservative
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InterPro; IPR001315; CARD.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; 2,
Pfam; PF00653; BIR; 2,
Pfam; PF00619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 2.
SMART; SM00114; CARD; 1.
SMART; SM00114; RING; 1.
                                                                                                                                                       LHUMAN STANDARD; PRT; 604 AA.

BIR2_HUMAN STANDARD; PRT; 604 AA.

Q11489; Q16628; Q9UP46;

Q1-NOV-1997 (Rel. 35, Created)

O1-NOV-1997 (Rel. 35, Last sequence update)

20-AUG-2001 (Rel. 40, Last annotation update)

BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1 (INHIBITOR OF APOPTOSIS PROTEIN 1) (HIAP-1) (G-IAP2) (TNFR2-TRAF SIGNALING COMPLEX PROTEIN 1) (IAP HOMOLOG C).

BIRC2 OR API1 OR IAP1 OR MIHC.

HOMO Saplens (Human).

FILETROFA MERSZOR CONTAGETS. Cranists. Vertabrats. Futblecsformi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stehnik C., de Martin R., Binder B.R., Lipp J.;
Cytokine induced expression of porcine inhibitor of
protein (lap) family member is regulated by NF-kappa
Biochem. Biophys. Res. Commun. 243:827-832(1998).
-- SIMILARITY: CONTAINS TO THE INFRANTIX.
-- SIMILARITY: CONTAINS 1 BERDOMAIN.
-- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                      mammalia; Eutheria; Primates; (NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bloinformatics and the European Bioinformatics Institute. There are use by non-profit institutions as long as its commodified and this statement is not removed. Usage entitles requires a license agreement (See http://worsend an email to license@isb-sib.ch).
SEQUENCE FROM N.A.

MEDLINE-96128127; PubMed-8548810;

Rothe M., Pan M.-G., Henzel W.J., Ayres T.M., Goeddel D.V.;

"The TNFR2-TRAF signaling complex contains two novel proteins to baculoviral inhibitor of apoptosis proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U79142; AAC39171.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-98162622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                               24
                                                                                                                                                                                                                                                                                                                                                                                                             PS01282; BIR_REPEAT_1;
PS50143; BIR_REPEAT_2;
PS50209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Zinc-finger; Repeat.
4 70 BII
90 157 BII
311 345 RII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=9501011;
rtin R., Binder B.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40977 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95.2%;
93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BIR 1.
BIR 2.
RING-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 256; DB 1;
Pred. No. 6.5e-26;
2; Mismatches 1
                                                                                                                             Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EB2268FA9A6190A4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             There are no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  through a collaboration d the EMBL outstation -
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                                                                                                                                                Euteleostomi;
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B.";
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                          related
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
           EL BLOOD 93:3418-3431(1999).

EL BLOOD 93:3418-3431(1999).

C -1- FUNCTION: APOPTOTIC SUPPRESSOR. THE BIR MOTIFS REGION INTERACTS

C WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND TRAF2) TO

FORM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO THE TUMOR

C -1- SUBCELULAR LOCATION: CYTOPLASMIC (POTENTIAL).

C -1- SUBCELULAR LOCATION: CYTOPLASMIC (POTENTIAL).

C -1- SINGLESH SPECIFICITY: HIGHLY EXPRESSED IN FETAL LUNG, AND KIDNEY. IN

THE ADULT, EXPRESSION IS MAINLY SEEN IN LYMPHOID TISSUES,

INCLUDING SPLEEN, THYMUS AND PERIPHERAL BLOOD LYMPHOCYTES.

C -1- SIMILARITY: CONTAINS 3 BIR REPEATS.

C -1- SIMILARITY: CONTAINS 1 CARD DOMAIN.

SIMILARITY: CONTAINS 1 CARD DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Farahani R., McLean M., Ike
"Suppression of apoptosis in
family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                                             Pfam: PF00619; CARD; 1.
Pfam: PF00097; zf-C3HC4; 1.
SMART; SM000238; BIR; 3.
SMART; SM00014; CARD; 1.
SMART; SM000184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDINE-99252096; PubMed-10233894; Horrevoets A.J., Fontijn R.D., van Zonneveld A.J., de Vries C.J ten Cate J.W., Pannekoek H.; Pannekoek H.; "Vascular endothelial genes that are responsive to tumor necros. factor-alpha in vitro are expressed in atherosclerotic lesions, including inhibitor of apoptosis protein-1, stannin, and two no
                                                                                                                                                                                                                                                                                                                         EMBL; AF0706
MIM; 601712;
                                                                                                                                                                                                                                                                                                                                                       EMBL; L49432; AAC41943.1; -. EMBL; U45878; AAC50371.1; -. EMBL; U37546; AAC50507.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Uren A.G., Pakusch M., Hawkins C.J., "Cloning and expression of apoptosis function to inhibit apoptosis and/or receptor associated factors.";
                                                             Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Fetal liver;
MEDLINE=96209843; PubMed=8643514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell 83:1243-1252(1995).
                                                                                                         PROSITE: PS01282; BIR_REPEAT_1; PS01183; BIR_REPEAT_2; PS0209; CARD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liston P., Roy N., Tamai K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-96149249; PubMed-8552191;
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                                                                                                                                                                                                                                                     Pfam; PF00653;
                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                       [nterPro;
                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
                                                                                                                                                                                                                                                                                                                                        AF070674; AAC83232.1;
                                                                                                                                                                                                                                                                  IPR001370; BIR.
IPR001315; CARD.
IPR001841; Znf_ring
       ; Zinc-finger;
29 96
169 235
255 322
447 525
557 591
                                                                                                                                                                                                                                                     BIR; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             i K., Lefebvre C., Baird S., Cherton-Horvat
Ikeda J., Mackenzie A., Korneluk R.G.;
is in mammalian cells by NAIP and a related
                                                                                             Repeat
                        BIR 1.
BIR 2.
BIR 3.
CARD.
           RING-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Puls K.L., Vaux D.L.;
inhibitory protein ho
bind tumor necrosis f
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a collaboration -MBL outstation

outstation

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                                                                                                                                                                                                                                                                              IT 1 and 2 genes.*;

(I Genomics 46:495-503(1997).

(I Genomics 46:495-503(1997).

(I GENOMICS 46:495-503(1997).

(I WITH THE RECEPTOR ASSOCIATED FACTORS 1 AND 2 (TRAF1 AND 2 CONFLEX, WHICH IS THEN RECRUITED TO 2 POM AN HETEROMERIC COMPLEX, WHICH IS THEN RECRUITED TO 3 NECESTARY.

(I NECESTARY ACTOR RECEPTOR 2 (TWFR2) (BY SIMILARITY).

(I SIMILARITY: CONTAINS 3 BIR REPEATS.

(I SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OOBBG3;
O1-NOV-1997 (Rel. 35, Last sequence update)
O1-NOV-1997 (Rel. 35, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 2 (J
BROTEIN 1) (MIAP1) (MIAP-1).
BRC2 OR APII OR IAP1
Mus musculus (MOUSE),
ELKALYOCE, Metazoa; Chordata; Craniata; Vertei
Mammalla; Eutheria; Rodentia; Sciurognathi; M
                         Pfam; PF00653; BIR; 3. Pfam; PF00619; CARD; 1. Pfam; PF000619; cFC3HC4; 1. SMART; SM00238; BIR; 3. SMART; SM00114; CARD; 1. SMART; SM001184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM P....
TISSUE-Skeletal muscle;
MEDLINE-98110590; PubMed-9441758;
MEDLINE-98110590; PubMed-9441758;
Liston P., Lefebvre C., Fong W.G., Xuan J.Y., Korneluk R.G.;
Liston P., Lefebvre Cl, Fong W.G., Xuan J.Y., Korneluk R.G.;
                                                                                                                                                                                                                                the
                                                                                                                                                                                use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                              This
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                                                                                                  InterPro; IPR001370; BIR. InterPro; IPR001315; CARD. InterPro; IPR00181; Znf_ring
                                                                                                                                            EMBL; U88908; AAC53531.1; -. MGD; MGI:1197007; Birc2.
                                                                                                                                                                                                                                                  between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     189
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                                                                                                                                                                                                                                s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42; Conser
 PS01282; BIR_REPEAT_1; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18
119
153
163
165
191
364
552
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119
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2; Mismatches
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1 -> H (IN REF. 2).
1 -> E (IN REF. 2).
1 -> P (IN REF. 2).
1 -> P (IN REF. 2).
1 -> P (IN REF. 2).
2 -> L (IN REF. 2).
3 -> P (IN REF. 2).
8581A00BA9AAB4A7 C
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PROTEIN 2 (INHIBITOR
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No. 1
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thi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
.2e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₹
                                                                                                                                                                                                                   as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 604;
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TRAF1 AND TRAF2) TO
RUITED TO THE TUMOR
                                                                                                                                                                                                                                                                                                                                                                                                                              apoptosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
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RESULT 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BIR4_HUMAN STANDARD: PRT: 497 AA.

P98170; Q98014;

101-OCT-1996 (Rel. 34, Created)

101-OCT-1996 (Rel. 34, Last sequence update)

20-AUG-2001 (Rel. 40, Last annotation update)

BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INFPROTEIN 3) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (HILP).

BIRC4 OR API3 OR IAP3 OR XIAP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
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DOMAIN
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                         Gratham D. Submitted
                                                                                                                                                                                                                                                     TISSUE-Fetal heart;
MEDLINE-96256286; PubMed-8654366;
Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J., v
Gilfillan M.C., Shiels H., Hardwick J.M., Thompson
"A conserved family of cellular genes related to th
gene and encoding apoptosis inhibitors.";
EMBO J. 15:2685-2694(1996).
                                                                                                                                                                                                                                                                                                                                                    TISSUE-Fetal brain;
MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird Farahani R., McLean M., Ikeda J., Mackenzle A., "Suppression of apoptosis in mammalian cells by family of IAP genes.";
Nature 379:349-353(1996).
                                                                                                                                Deveraux Q.L., Takahashi R., Salvesen G.S., Reed J.C.; "X-linked IAP is a direct inhibitor of cell-death prot Nature 388:300-304(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                      +
                                                                                                                                                                     MEDLINE=97373959; PubMed=9230442;
                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                  FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187 LAKAGFYYIGPGDRVACFACDGKLSNWERKDDAMSEHQRHFPSCPF 232
                        LEUKOCYTES.
SIMILARITY:
SIMILARITY:
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                 TISSUE SPECIFICITY: UBIQUITOUS,
                                                                                                          FUNCTION: APOPTOTIC CASPASE-7.
                                                                                              SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 89.1
41; Conservative
                                                                                                                                                                                                                                FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50209;
                                                                                                                                                                                                         (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS50209; CARD;
; Zinc-finger;
27 94
167 233
253 320
444 512
553 587
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                       BELONGS TO THE IAP FAMILY.
CONTAINS 3 BIR REPEATS.
CONTAINS 1 RING-TYPE ZINC
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89.1%;
                                                                                                                                                                                                         the
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Repeat.
                                                                                                                      SUPPRESSOR. INHIBITOR OF CASPASE-3 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                              CYTOPLASMIC
                                                                                                                                                                                                         EMBL/GenBank/DDBJ databases
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Pred. No. 9.6e
3; Mismatches
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BIR 2.
BIR 3.
CARD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AD7F73E6849317D1 CRC64;
                                                                                  EXCEPT
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.6e-24;
                               FINGER
                                                                                                                                                                                                                                                                              R.J., van Dongen J.L., hompson C.B.; ed to the baculovirus i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED IAP)
                                                                                                                                                                                                                                                                                                                                                                                         S., Cherton-Horvat G., Korneluk R.G.;
NAIP and a related
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                                                                                                                                            proteases.";
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; Homo.
                                                                                                                                                                                                                                                                                baculovirus iap
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Best Local S
Matches 34
                                                                                                                                                                                                                                                                                                                                      TISSUE-Spleen:
MEDLINE-97101112; PubMed-8945639;
Digby M.R., Kimpton W.G., York J.J.
Digby M.R., Kimpton W.G., York J.J.
"ITA, a vertebrate homologue of IAP
lymphocytes.";
DNA Cell Biol. 15:981-988(1996).
-i- FUNCTION: APOPTOTIC SUPPRESSOR
-i- SUBCELLULAR LOCATION: PREDOMINA
-i- TISSUE SPECIFICITY: CELLS OF THE
BOTH CORTICAL AND MEDUILARY CEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q90660;
01-NOV-1997 (
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INHIBITOR OF
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ZN_FING
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CONFLICT
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SMART;
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Pfam; PF00097; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; U45880; AAC50373.1; -. EMBL; U32974; AAC50518.1; -. EMBL; AL121601; CAB95312.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS50143; BIR_REPEAT_2;
Apoptosis; Zinc-finger; Repeat;
REPEAT 26 93 BIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a 
or send an email to
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIR_CHICK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: APOPTOTIC SUPPRESSOR (BY SIMILARITY).

SUBCELLULAR LOCATION: PREDOMINANTLY NUCLEAR.

TISSUE SPECIFICITY: CELLS OF THE T LYMPHOCYTE LINEAGE. FOUND II
BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.

BOTH CORTICAL AND MEDULLARY CELLS OF THE THYMUS.

DEVELOPMENTAL STAGE: HIGH LEVELS ARE INDUCED WITHIN 4-8 HOURS OF THE TAY OF THE TAY OF THE TAY OF THE TAY OF THYMUS.

T-CELL ACTIVATION IN SPLEEN AND THYMUS.

SIMILARITY: BELONGS TO THE IAP FAMILY.

SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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SM00184; RING; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 73.9
34; Conservative
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26 93
163 230
265 330
450 484
162 162
423 423
427 AA; 56684 M
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(Rel. 35, Last sequence update)
(Rel. 40, Last annotation updat
F APOPTOSIS PROTEIN (IAP) (INHIB
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Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.48; 73.98;
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EPEAT_2; 3.
Repeat; Thiol protease inhibitor.
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BIR 3.
RING-TYPE.
RING-TYPE.
S -> C (IN REF. 1).
Q -> P (IN REF. 2).
Q -> P (50 REF. 2).
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Pred. No. 1.8e-17;
1; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasianinae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J.J., Connick T.E., Lowenthal f IAP that is expressed in T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n update)
(INHIBITOR
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               a collaboration
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RESULT 8
BIR4_MOUSE
ID BIR4_MOUSE
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Pfam; PF000619; CARD; 1.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00238; BIR; 3.
SMART; SM00114; CARD; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          060989; 008865;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 4 (INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED INHIBITOR OF APOPTOSIS PROTEIN) (X-LINKED INAP)
(IAP HOMOLOG A) (MIAP3) (MIAP-3).
BIRC4 OR API3 OR XIAP OR AIPA OR MIHA.
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                                                           SEQUENCE FROM N.A.

Farahani R., Lefebvre C., Korneluk R.G., Mackenzie A.E.;
Farahani R., Lefebvre C., Korneluk R.G., Mackenzie A.E.;
Submitted (JUN1997) to the EMBL/GenBank/DDBJ databases.

-I. FUNCTION: APOPTOTIC SUPPRESSOR. INHIBITOR OF CASPASE-3
CASPASE-7 (BY SIMILARITY).

-I. SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).

-I. SUBLARITY: BELONGS TO THE IAP FAMILY.

-I. SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).

"Arvota, Metazoa, Chordata, Arvota, Metazoa, Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
ZN_FING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                STRAIN-C57BL/6 X CBA: TISSUE-Liver;
MEDLINE-96209943; PubMed-8643514;
Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., V.
"Cloning and expression of apoptosis inhibitory p
function to inhibit apoptosis and/or bind tumor n
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
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PROSITE; PS50143; BIR_REPEAT_2; 3.
PROSITE; PS50209; CARD; 1.
Apoptosis; Zinc-finger; Repeat; Nuclear REPEAT 30 97 BIR 1.
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InterPro; IPR001841; Znf_ring.
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262
564
611 AA;
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71.7%;
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BIR 2.
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W; 53FC9136F34EBDDD CRC64;
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Sciurognathi; Muridae;
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.9e-17;
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tumor necrosis factor
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; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                           D.L.;
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InterPro; IPR001370; BIR.
InterPro; IPR001841; Znf_ring.
InterPro; IPR001841; Znf_ring.
Pfam; PF00653; BIR; 3.
Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00184; RING; 1.
SMART; SM00184; RING; 1.
PROSITE; PS01282; BIR_REPEAT_1; 3.
PROSITE; PS01282; BIR_REPEAT_2; 3.
                                                        "RATLUS NOTVEGICUS X-linked inhibitor of apoptosis (riap3) mRNA.";
Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.
-!-FUNCTION: APOPTOTIC SUPPRESSOR. INHIBITOR OF CASPASE-3 AND
CASPASE-7 (BY SIMILARITY).
-!-SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).
-!-SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).
-!-SIMILARITY: BELONGS TO THE IAP FAMILY.
-!-SIMILARITY: CONTAINS 3 BIR REPEATS.
-!-SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIR4_RAT
Q9R0I6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REPEAT
ZN_FING
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Rat).
Eukaryota: Metazoa; Chordata;
Mammaila; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. Thuse by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                       Salto N.;
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
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264 329

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; Pred. NO. 7.9e
1; Mismatches
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.9e-17
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; Murinae; Rattus
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RESULT
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Best Local S
Matches 33
                                                                                                                                         TISSUE-Brain;
MEDLINE-98163755; PubMed=9503025;
Chen Q., Baird S.D., Mahadevan M., Besner Xuan J.-Y., Kang X., Lefebvre C., Ikeda J MacKenzie A.E.;
"Sequence of a 131-kb region of 5q13.1 co atrophy candidate genes SMN and NAIP.";
Genomics 48:121-127(1998).
                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Fetal brain;

MEDLINE-95112344; PubMed-7813013;

ROY N., Mahadevan M.S., McLean M., Shutler G., Yaraghi Z.,

Farahini R., Baird S., Besner-Johnston A., Lefebvre C., Kang X.,

Salih M., Aubry H., Tamai K., Guan X., Ioannou P., Crawford T.O.,

de Jong P.J., Surh L., Ikeda J., Korneluk R.G., Mackenzie A.;

"The gene for neuronal apoptosis inhibitory protein is partially
deleted in individuals with spinal muscular atrophy.";

Cell 80:167-178(1995).
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Pfam; PF00097; zf-CJHC4; 1.
SMART; SM00238; BIR; 3.
SWART; SM00184; RING; 1.
SWART; SM00184; RING; 1.
SPROSITE; PS01282; BIR_REPEAT_1; 3
PROSITE; PS0143; BIR_REPEAT_2; 3
SEQUENCE OF 386-623 F
der Steege G., Draalj
Anzevino R., Velona I
Buys C.H.C.M.;
Submitted (MAY-1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Pr
NCBI_TaxID=9606;
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REPEAT
ZN_FING
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A., AND REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INHIBITORY PROTEIN).
BIRC1 OR NAIP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AB033366; BAA85304.1; ... InterPro; IPR001370; BIR. InterPro; IPR001841; Znf_ring.
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26 93 BIR 1.

REPEAT 163 230 BIR 2.

REPEAT 264 329 BIR 3.

ZN_FING 449 483 RING-TYPE.
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l Similarity 71.7%;
33; Conservative
(MAY-1995) to the EMBL/GenBank/DDBJ
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163
264
449
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G., Draaljers T.G.,
Velona I., Brahe
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Pred. No. 1.
                                              c.,
                                              Grøotscholten P.M., Osinga
C., Scheffer H., van Ommen
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tent is in no
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                                              G.J.B.,
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RESULT 11
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ID BIRG_M
AC 09JIB3
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Best Local S
Matches 25
BIRG_MOUSE
09JIB3;
20-AUG-2001
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U19251; AAC52045.1; -. EMBL; U80017; AAC52047.1; -. EMBL; U21913; AAA64504.1; -. EMBL; AC005031; AAC62261.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family of IAP genes.";
Nature 379:349-353(1996).
-i- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-96149249; PubMed-8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird
Farahani R., McLean M., Ikeda J., MacKenzie A.,
"Suppression of apoptosis in mammalian cells by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 222-1403
Jones K., Graves T.,
Submitted (JUN-1998)
[5]
                                                                                                                                                                                                                                                                                                                                              SMART: SM00238; BIR: 3.
pr0SITE: pS01282: BIR_REPEAT_1;
pr0SITE: pS50143; BIR_REPEAT_2;
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DISEASE: MUTATED OR DELETED FORMS OF NAIP HAVE BEEN FOUND IN DISEASE: MUTATED PRIVAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SMAS INDIVIDUALS WITH SPINAL MUSCULAR ATROPHY TYPE I (SMA TYPE 1). SMAS ARE FARLA AUTOSOMAL RECESSIVE DISORDERS SUBCLASSIFIED AS TYPE I (WERNDIG-HOFEMANN DISEASE), TYPE II (INTERNEDIATE PORM), AND TYPE III (WOHLFART-KUGELLBERG-WELANDER DISEASE) BASED UPON THE AGE OF ONSET AND CLINICAL SEVERITY. THESE NEURODEGENERATIVE DISORDERS ARE CHARACTERIZED BY DEGENERATION OF LOWER MOTOR NEURONS, LEADING TO PROGRESSIVE PARALYSIS MUSCULAR ATROPHY. CONCERNS 1 IN 6000 NEWBORNS.

- SIMILARITY: CONTAINS 3 BIR REPEATS.
                                                                                                        1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE SPECIFICITY: EXPRESSED IN
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to the EMBL/GenBank/DDBJ databases
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BIR 2.

BIR 3.

BY -> YR (IN REF. 4).

PK -> ST (IN REF. 3).

M -> V (IN REF. 3).

Y -> H (IN REF. 3).

Y -> H (IN REF. 4).

MISSING (IN REF. 4).
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Pred. No. 1.9e
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les 15;
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Korneluk R.G.;
NAIP and a related
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Best Local S
Matches 24
                                                                                                                                                                                     BIRA_MOUSE STANDARD; PRT; 1403 AA.

Q9QWK5; Q9R017; Q9JIB5;
20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1A (NI BIRCIA OR NAIP1 OR NAIP.

BIRCIA OR NAIP1 OR NAIP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@ibb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1G INHIBITORY PROTEIN 7).
BIRCLG OR NAIP7.
                                            SEQUENCE FROM N.A.

Yaraghi Z., Korneluk R.G., MacKenzie A.E.;

Yaraghi Z., Korneluk R.G., MacKenzie A.E.;

The copies of the common and characterization of the multiple copies of the homologue of NAIP (neuronal apoptosis inhibitory protein).*

Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
 SEQUENCE FROM N.A MEDLINE-99431676;

    PROSITE;
    PS01282;
    BIR_REPEAT_1;
    2.

    PROSITE;
    PS50143;
    BIR_REPEAT_2;
    3.

    Apoptosis;
    Reppeat;
    Multigene family.

    REPEAT
    60
    127
    BIR 1.

    REPEAT
    159
    23
    BIR 2.

    REPEAT
    278
    345
    BIR 3.

    SEQUENCE
    1402
    AA;
    159662
    MW;
    C1D

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AE242433; AAF82749.1; -. MGD; MGI:1858556; Birclg. Interpro; IPR001370; BIR. Pfam; PF00653; BIR; 3. SMART; SM00238; BIR; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome Res. 10:1095-1102(2000),
-!- FUNCTION: PREVENTS MOTOR-NEURON APOPTOSIS INDUCED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDLINE-20414747; PubMed-10958627;

Endrizzi M.G., Hadinoto V., Growney J.D., Miller V

Endrizzi M.G. analysis of the mouse Naip gene

"Genome Res. 10:1095-1102(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
                                                                                                                                            NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNALS
                                                                                                                                                                                                                                                                                                                                                                                                                    LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHEPNCPF
                                                                                                                                                                                                                                                                                                                                                                                                   LSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.4%;
ilarity 52.2%;
Conservative '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Mouse).
   PubMed-10501978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                             Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              : Score 141; DB
: Pred. No. 2e~1
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                             Craniata; Vertebrata; ! Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C1DFFBA359893E0D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2e-10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Length 1402;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (NEURONAL
                                                                                                                                                                                                                                           (NEURONAL APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              array
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                                                                                                                                                             Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dietrich
ray.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 restrictions
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ch/announce/
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RESULT 13
BIRE_MOUSE
ID BIRE_M
AC Q9R016
DT 20-AUG
DT 20-AUG
DT 20-AUG
DT 1NHLBI
GN BACULO
GE BACULO
GE ENKATY
OC MANDA1
OX NCBL T
OX NC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 24
                                                                                                                 BIRE_MOUSE STANDARD; PRT; 1403 AA.

Q9R016; Q9R029; PB1703; C09122; C09121;

20-AUG-2001 (Rel. 40, Created)

20-AUG-2001 (Rel. 40, Last sequence update)

20-AUG-2001 (Rel. 40, Last sequence update)

20-AUG-2001 (Rel. 40, Last annotation update)

BACULOVIRAL IAP REPEAT-CONTAINING PROTEIN 1E (NE
INHIBITORY PROTEIN 5).

BIRCIE OR NAIP5 OR NAIP-RS3.

Mus musculus (Mouse).

Eukaryota, Metazoa; Chordata; Craniata; Vertebra

Mammalia; Eutheria; Rodentia; Sciurognathi; Muri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF007769; AAB5923.1; -.
EMBL; AF13549; AAD56763.1; -.
EMBL; AF242432; AAF92752.1; -.
MGD; MGI:129823; Bircla.
InterPro; IPR001370; BIR.
P£am; PF00653; BIR; 3.
SMART; SM0023B; BIR, REPEAT_1;
PROSITE; PS01282; BIR_REPEAT_1;
PROSITE; PS01282; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REPEAT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercia entitles requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Endrizzi M.G., Hadinoto V., Growney J.D., Miller W., Dietrich "Genomic sequence analysis of the mouse Naip gene array."; Genome Res. 10:1095-1102(2000).
   SEQUENCE FROM N.A.
MEDLINE-99431676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Huang S., Scharf J.M., Growney 3
"The mouse Naip gene Cluster on
functional transcripts.",
Mamm. Genome 10:1032-1035(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCEF 226
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SIMILARITY: CONTAINS 3 BIR REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 52.2
24; Conservative
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278
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345
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      PubMed-10501978
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BIR 1.
BIR 2.
BIR 3.
I -> V
L -> N
D -> N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 141; DB 1;
Pred. No. 2.1e-10;
                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B31630259595EE67
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N REEF. 2).

N REEF. 3).

N REEF. 3).

N REEF. 1).
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                                                                                                                                                                                                                                                                           (NEURONAL APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
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В 9

181 LSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCEF 226

LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF

46

Best Loc Matches

Similarity 52. 24; Conservative

52.4%;

; Score 141; DB ; Pred. No. 2.1e 4; Mismatches

DB 1; .1e-10; DΒ

Length 1403; Indels

0

Gaps

0

Local

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AFF 35 AFF 35 AFF 35 AFF 35 AFF 35 AFF 36 AF
  REPEAT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                   Apoptosis;
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          within th
exon 5.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF135492; AAD56764.1; -.
EMBL; AF131205; AAD56760.1; -.
EMBL; U66326; AAC52974.1; -.
MGD; MGI11298220; Bircle.
InterPro; IPR001370; BIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scharf J.M., Damron D., Frisella A., Bruno S., Beggs A.H., Kunkel L.M., Dietrich W.F.; "The mouse region syntenic for human spinal muscular atrophy liwithin the Lgnl critical interval and contains multiple copies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-129/SVJ;
STRAIN-129/SVJ;
MEDLINE-97131520; PubMed-8975718;
MEDLINE-97131520; Friselia
                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00653; BIR; 3.

SMART; SM00238; BIR; 3.

PROSITE; PS01283; BIR REPEAT_1;

PROSITE; PS50143; BIR_REPEAT_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99417674; PubMed-10486205;
Endrizzi M., Huang S., Scharf J.M.,
Kunkel L.M., Miller W., Dletrich W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genomics 38:405-417(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomics 60:137-151(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Comparative sequence analysis interval.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Huang S., Scharf J.M., Growney J.D., Endrizzi M.G., Dietrich W.F.; "The mouse Nalp gene cluster on Chromosome 13 encodes several distinct functional transcripts."; Manm. Genome 10:1032-1035(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00653;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - I - SIMILARITY: CONTAINS 3 BIR REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                       Repeat;
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1242
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     Ã,
                    159695
AMT_1; 2.
AMT_2; 3.
AMT_2; 3.
AMT_2; 3.
BIR 1.
BIR 1.

K -> R (IN REF. 1).

S -> R (IN REF. 2).

A -> D (IN REF. 2).

A -> I (IN REF. 2).

C -> N (IN REF. 2).

B -> O (IN REF. 2).

C -> N (IN REF. 2).

C -> N (IN REF. 2).

D -> N (IN REF. 2).

C -> N (IN REF. 2).

D -> N (IN REF. 2).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kelter A.R., Wirth
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       CRC64;
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BENEFIT BENEFI
    RESULT
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Best Local :
    P2_DROME S:
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Q24307; Q24177; Q
01-NOV-1997 (Rel
01-NOV-1997 (Rel
20-AUG-2001 (Rel
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BIRCIF OR NAIPE OR WAIP-RS4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
REPEAT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AF242431; AAF82751.1; EMBL; U66327; AAC52975.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-97131520; PubMed-8975718;
Scharf J.M., Damron D., Frisella A.,
Kunkel L.M., Dietrich W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 82-168 FROM N.A.
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"Genomic sequence analysis of the mouse Naip gene array
Genome Res. 10:1095-1107(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE-20414747; PubMed-10958627;
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-!- SIMILARITY: CONTAINS 3 BIR REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                           181 LSAAGFVFTGKRDTVQCFSCGGSLGNWEEGDDPWKEHAKWFPKCEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                 1 LARAGEYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCPF 46
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05. Miller (19822); Bircif,
05. Miller (19822); Bircif,
05. Miller (19822); Bircif,
06. Miller (19822); Bircif,
07. Miller (19822); Birciff,
07. 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E; PS01282; Bir_REPEAT_1; 2.
E; PS50143; Bir_REPEAT_2; 3.
sls; Repeat; Multigene family.
60 127 BIR 1.
159 227
159 245 BIR 2.
278 345 BIR 3.
CE 1403 AA; 159823 MW; 9D491
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milarity 52.2%;
Conservative
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(Rel.
STANDARD; PRT; 498 AA.; CALLS; Q241149; Q9V7GI; el. 35, Created) el. 35, Last sequence update) el. 40, Last annotation update)
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Pred. No. 2.1e-10;
4; Mismatches 18
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Sciurognathi; Muridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9D4912503358C4E9 CRC64;
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            RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Baeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler R.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Ratris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Ratris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Ratris N.L., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusakern D.R., Pacleb J.M.,
RA Rahert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Roher E., Spradifina A.C., Staeleton M., Strong R., Sin F.
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Duckett C.S., Nava V.E., Gedrich R.W., Clem R.J., van Dongen J.L.,
Gilfillan M.C., Shiels H., Hardwick J.M., Thompson C.B.;
"A conserved family of cellular genes related to the baculovirus iap
gene and encoding apoptosis inhibitors.";
EMBO J. 15:2685-2694(1996).
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MEDLINE-$6128128; PubMed-8548811;
MEDLINE-$6128128; PubMed-8548811;
Hay B.A., Wassarman D.A., Rubin G.M.;
"Drosophila homologs of baculovirus inhibitor of apoptosis proteins function to block cell death.";
Cell 83:1253-1262(1995).
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Eukaryota: Metazoa: Arthropoda: Tracheata: Hexapoda: Insecta: Pterygota: Neoptera: Endopterygota: Diptera: Brachycera: Muscomorpha: Ephydroidea: Drosophilidae: Drosophilida.
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MEDLINE=$149249: PubMed=8552191;
MEDLINE=$149249: PubMed=8552191;
Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat
Liston P., Roy N., Tamai K., Lefebvre C., Baird S., Cherton-Horvat
Farahani R., McLean M., Ikeda J., Mackenzie A., Korneluk R.G.;
"Suppression of apoptosis in mammalian cells by NAIP and a related
family of IAP genes.";
hature 379:349-353(1996).
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NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Stutton G.G., Wortman J.R., Yandell M.D. Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Haxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D., Basin A., Basin A., Barandale J., Barandale J., Rogers P. Baldwin D., Basin A., Barandale J., Barandale J., Rogers P. Baldwin D., Baldwin D., Barandale J., Barandal
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IAP2 OR ILP OR DIHA OR CG8293.
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        ., Simpson M., Skupski M.P., Stapleton M., Strong R., Sur
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Matches 23;
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Best Local
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EMBL: U45881; AAC46988.1; -.
EMBL: U45881; AAC46988.1; -.
EMBL: U45881; AAC46988.1; -.
EMBL: W52373; AAC47155.1; -.
EMBL: W52531; -; NOT_ANNOTATED_CDS.
EMBL: W52531; -; NOT_ANNOTATED_CDS.
EMBL: W53809; AAF58095.1; -.
EMBL: U38809; AAF68095.1; -.
EMBL: U38809; AF68095.1; -.
EMBL: U38809; AAF68095.1; -.
EMBL: U38809; AAF6809; AAF6809;
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Uren A.G., Pakusch M., Hawkins C.J., Puls K.L., Vaux D.L.;
"Cloning and expression of apoptosis inhibitory protein homologs that
function to inhibit apoptosis and/or bind tumor necrosis factor
receptor-associated factors.";
Proc. Natl. Acad. Sci. U.S.A. 93:4974-4978(1996).
-1- FUNCTION: APOPTOTIC SUPPRESSOR. OVEREXPRESSION SUPPRESSES RPR AND
HID-DEPENDENT CELL DEATH IN THE EYE.
-1- DEVELOPMENTAL STAGE: EXPRESSED AT HIGH LEVELS THROUGHOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -1- SIMILARITY: BELONGS TO THE IAP FAMILY.
-1- SIMILARITY: CONTAINS 3 BIR REPEATS.
-1- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 17-498 FROM N.A.
133
                                                                                                                                                                                               Local Similarity
                                                                       1 LARAGFYYIGPGDRVACFACGGKLSNWEPKDDAMSEHRRHFPNCP 45
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LAKAGFYYLNRLDHYKCYWCNGYIAKWEKNDNAFEEHKRFFPQCP 177
                                                                                                                                                       Conservative
                                                                                                                                                                                      52.0%;
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BIR 2.

BIR 3.

BIR 3.

RING-TYPE.

N -> K (IN REF. 2).

ER -> AG (IN REF. 3).

ER -> D (IN REF. 3).

A -> D (IN REF. 3).

A -> C (IN REF. 5).

A -> C (IN REF. 5).

A -> C (IN REF. 5).

A -> T (IN REF. 2).

A -> T (IN REF. 2).
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Pred. No. 9.8e~11;
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